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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,237	06/09/2006	Shigesumi Araki	290707US2PCT	1967

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
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ALEXANDRIA, VA 22314

EXAMINER

BLEVINS, JERRY M

ART UNIT	PAPER NUMBER
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2883

NOTIFICATION DATE	DELIVERY MODE
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12/26/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/582,237	Applicant(s) ARAKI ET AL.	
	Examiner JERRY BLEVINS	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed September 15, 2008, with respect to the rejection of claims 9-15 under 35 U.S.C. 112, second paragraph, have been fully considered and are persuasive. The rejection of claims 9-15 has been withdrawn.

Applicant's arguments filed September 15, 2008, with respect to the rejection of claims 9-15 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

Specifically, examiner admits that the Narutaki reference is silent regarding a voltage supplying source supplying the voltage applied to the blue pixel electrode in black display being different from the voltages applied to the red and green pixel electrodes in black display, but as specified in the June 13, 2008, office action and specified presently below, this limitation is sufficiently taught by the Hirai reference, and as such, examiner maintains the validity of the obviousness rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2883

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,624,860 to Narutaki et al. in view of US 6,005,646 to Nakamura et al. and in view of US 6,122,021 to Hirai et al.

Regarding claims 9 and 12, Narutaki teaches a liquid crystal display device comprising: a liquid crystal display cell comprising: an array substrate having a pixel electrode for each color of red, green, and blue arranged on the display screen in a matrix form, an opposing substrate having an opposing electrode arranged in such a manner as to face the pixel electrodes of the array substrate (all, column 3, lines 10-54), an alignment layer (column 35, lines 53-57) formed on the pixel electrode and the opposing electrode, a liquid crystal layer (column 2, lines 38-49) interposed between the array substrate and the opposing substrate, and a filter comprising a red filter layer, a green filter layer, and a blue filter layer provided on one side of the substrate, the red filter layer being arranged corresponding to the red pixel electrode, the green filter layer being arranged corresponding to the green pixel electrode, and the blue filter layer being arranged corresponding to the blue pixel electrode (column 3, lines 10-54); a phase difference plate (column 3, lines 55-59) arranged on at least one of main surfaces of the liquid crystal display cell; a pair of polarization plates (column 7, lines 29-34) arranged so as to interpose the liquid crystal display cell and the phase difference plate in the crossed-Nicol configuration (column 9, lines 17-26); and a voltage supplying source (column 2, lines 38-49), the voltage of the blue pixel electrode in black display being set to a voltage making the v' value of the $u'v'$ chromaticity diagram become the maximum (Figure 24), and the maximum voltage of the blue pixel electrode being set to

Art Unit: 2883

a voltage making the Z value of the XYZ stimulus value become the minimum (column 30, line 15 – column 31, line 23). Narutaki does not teach that the liquid crystal layer is arranged in bend alignment. Nakamura teaches a liquid crystal layer arranged in bend alignment (column 1, lines 13-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the liquid crystal layer of Narutaki in bend alignment, as taught by Nakamura. The motivations would have been to improve the viewing angle and motion display characteristics of the display (column 1, lines 13-46). Narutaki also does not teach that the voltage applied to the blue pixel electrode in black display is different from the voltages applied to the red and green pixel electrodes in black display. Hirai teaches a voltage applied to a blue pixel electrode in black display which is different from the voltages applied to red and green pixel electrodes in black display (column 37, lines 53-63 and column 40, lines 14-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a different voltage to the blue pixel electrode of Narutaki than to the red and green pixel electrodes in black display, as taught by Hirai. The motivation would have been to improve the picture quality of the display due to the differences in transmittance of the different colored pixel electrodes (column 37, lines 53-63 and column 40, lines 14-25).

Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narutaki in view of Nakamura and in view of Hirai as applied to claims 9 and 12, respectively, above, and further in view of US 2004/0218115 to Kawana et al.

Art Unit: 2883

Regarding claims 10 and 13, Narutaki in view of Nakamura and in view of Hirai renders obvious the limitations of the base claims 9 and 12, respectively. Narutaki does not teach a backlight source arranged on a side of the polarization plate having light emission peaks in light wavelength regions appropriate to the red, green, and blue filter layers, respectively, and the blue wavelength region having light emission peaks at a longer wavelength side and a shorter wavelength side with reference to 450 nm. Kawana teaches a backlight source arranged on a side of a polarization plate having light emission peaks in light wavelength regions appropriate to the red, green, and blue filter layers, respectively, and the blue wavelength region having light emission peaks at a longer wavelength side and a shorter wavelength side with reference to 450 nm (paragraphs 32, 233, and 235). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the backlight of Kawana on a side of the polarization plate of Narutaki. The motivation would have been to increase the brightness of the display.

Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narutaki in view of Nakamura and in view of Hirai as applied to claims 9 and 12, respectively, above, and further in view of US 6,493,053 to Miyachi et al.

Regarding claims 11 and 14, Narutaki in view of Nakamura and in view of Hirai renders obvious the limitations of the base claims 9 and 12, respectively. Narutaki does not teach that the phase different plate comprises a hybrid phase difference plate and a double-axial phase difference plate. Miyachi teaches a phase different plate comprising

Art Unit: 2883

a hybrid phase difference plate and a double-axial phase difference plate (column 11, lines 34-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the phase difference plate comprising a hybrid phase difference plate and a double-axial phase difference plate, as taught by Miyachi, as the phase difference plate of Narutaki. The motivation would have been to increase the functionality of the phase difference plate (column 11, lines 34-38).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narutaki in view of Nakamura and in view of Hirai and in view of Miyachi.

Regarding claim 15, Narutaki teaches a liquid crystal display device comprising: a liquid crystal display cell comprising: an array substrate having a pixel electrode for each color of red, green, and blue arranged on the display screen in a matrix form, an opposing substrate having an opposing electrode arranged in such a manner as to face the pixel electrodes of the array substrate (all, column 3, lines 10-54), an alignment layer (column 35, lines 53-57) formed on the pixel electrode and the opposing electrode, a liquid crystal layer (column 2, lines 38-49) interposed between the array substrate and the opposing substrate, and a filter comprising a red filter layer, a green filter layer, and a blue filter layer provided on one side of the substrate, the red filter layer being arranged corresponding to the red pixel electrode, the green filter layer being arranged corresponding to the green pixel electrode, and the blue filter layer being arranged corresponding to the blue pixel electrode (column 3, lines 10-54); a phase difference plate (column 3, lines 55-59) arranged on at least one of main surfaces of the liquid

Art Unit: 2883

crystal display cell; a pair of polarization plates (column 7, lines 29-34) arranged so as to interpose the liquid crystal display cell and the phase difference plate in the crossed-Nicol configuration (column 9, lines 17-26); and a voltage supplying source (column 2, lines 38-49), the voltage of the blue pixel electrode in black display being set to a voltage making the v' value of the $u' v'$ chromaticity diagram become the maximum (Figure 24). Narutaki does not teach that the liquid crystal layer is arranged in bend alignment. Nakamura teaches a liquid crystal layer arranged in bend alignment (column 1, lines 13-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the liquid crystal layer of Narutaki in bend alignment, as taught by Nakamura. The motivations would have been to improve the viewing angle and motion display characteristics of the display (column 1, lines 13-46). Narutaki also does not teach that the voltage applied to the blue pixel electrode in black display is different from the voltages applied to the red and green pixel electrodes in black display. Hirai teaches a voltage applied to a blue pixel electrode in black display which is different from the voltages applied to red and green pixel electrodes in black display (column 37, lines 53-63 and column 40, lines 14-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a different voltage to the blue pixel electrode of Narutaki than to the red and green pixel electrodes in black display, as taught by Hirai. The motivation would have been to improve the picture quality of the display due to the differences in transmittance of the different colored pixel electrodes (column 37, lines 53-63 and column 40, lines 14-25). Narutaki also does not teach that the phase different plate comprises a hybrid phase difference plate. Miyachi

Art Unit: 2883

teaches a phase different plate comprising a hybrid phase difference plate (column 11, lines 34-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the phase difference plate comprising a hybrid phase difference plate and a double-axial phase difference plate, as taught by Miyachi, as the phase difference plate of Narutaki. The motivation would have been to increase the functionality of the phase difference plate (column 11, lines 34-38).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY BLEVINS whose telephone number is (571)272-8581. The examiner can normally be reached on Monday through Friday.

Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry M Blevins/
Patent Examiner, Art Unit 2883

/CHARLIE PENG/
Primary Examiner, Art Unit 2883

CYP/jmb
12/22/2008